AMENDMENTS TO THE CLAIMS

1. (Previously presented) A vessel suitable for accepting a liquid biological sample, which exposes said sample to a first substance and subsequently a nucleic acid stabilizing agent, said vessel comprising:

a) a first substance present inside said vessel,

b) a container in which said stabilizing agent is present,

c) a connection between the inside of said vessel and the inside of said container,

d) a physical barrier that temporarily blocks said connection.

2. (Previously presented) The vessel according to claim 1 wherein said first substance is immobilized on part or all of the inside surface of said vessel.

3. (Previously presented) The vessel according to claim 1 wherein said first substance is immobilized on a solid support.

4. (Previously presented) The vessel according to claim 1 wherein said first substance is a liquid.

5. (Previously presented) The vessel according to claim 1 wherein said first substance is a solid.

6. (Previously presented) The vessel according to claim 1 comprising one or more areas suitable for puncture by a syringe needle.

7. (Previously presented) The vessel according to claim 6 wherein said area is a re-sealable septum.

8. (Previously presented) The vessel according to claim 1, further comprising a fitting suitable for receiving a syringe and transmitting the contents therein to the interior of said vessel.

9. (Previously presented) The vessel according to claim 1, further comprising a fitting suitable for receiving a syringe needle or cannula.

10. (Cancelled)

11. (Previously presented) The vessel according to claim 1, further comprising a valve which is capable of minimizing the flow of gas/liquid from the vessel, and allowing the flow of liquid biological sample into the vessel.

12. (Previously presented) The vessel according to claim 1, further comprising a means through which displaced gas may be expelled.

13. (Previously presented) The vessel according to claim 1 wherein said vessel is held under negative pressure.

14. (Previously presented) The vessel according to claim 1 wherein the physical barrier of item d) is opened by the application of physical force to said vessel.

15. (Previously presented) The vessel according to claim 14 wherein said force transmits an opening means to said physical barrier.

16. (Previously presented) The vessel according to claim 14 wherein said force irreversibly opens said physical barrier.

17. (Previously presented) The vessel according to claim 1 wherein said vessel further comprises an indication for dispensing a known volume of stabilizing agent therein.

18. (Previously presented) The vessel according to claim 1 wherein said first substance comprises one or more immune system antigens.

19. (Previously presented) The vessel according to claim 18 wherein said immune system antigens are vaccine components.

20. (Previously presented) The vessel according to claim 18 wherein said immune system antigens are antigens which provoke a hyperallergenic response.

21. (Previously presented) The vessel according to claim 18 wherein said immune system antigens are one or more selected from the group consisting of histocompatibility antigens, bacterial LPS, tetanous toxoid, a cancer immunotherapy antigen, MAGE-3, a cat allergen, Feld1, antigen presenting cells from an organ donor, an autoantigen, and GAD65.

22. (Previously presented) The vessel according to claim 1 wherein said stabilizing agent is an inhibitor of cellular RNA degradation and/or gene induction.

23. (Previously presented) The vessel according to claim 22 wherein said inhibitor of cellular RNA degradation and/or gene induction is that as found in a PAXgene^{TM} Blood RNA Tube.

24. (Previously presented) A method of testing RNA components in a stabilized blood sample which comprises pulsing a sample of blood with an antigen in the vessel according to claim 1, and subsequently inhibiting cellular RNA degradation and/or gene induction therein.

25. (Previously presented) A method of testing an immune response of an individual towards an antigen comprising the steps of:
a) introducing a sample of blood taken from said individual into the vessel of claim 1,
b) agitating said vessel,
c) introducing after a pre-determined period of time, said nucleic acid stabilizing agent into said vessel, and
d) testing the levels of mRNA,
wherein the first substance is the antigen.

26. (Previously presented) The method according to claim 25 where step d) further comprises the steps of :

e) forming a precipitate comprising nucleic acids,

f) separating said precipitate of step (e) from the supernatant,

g) dissolving said precipitate of step (f) using a buffer, forming a suspension,

h) isolating nucleic acids from said suspension of step (g) using an automated device,

i) dispersing/distributing a reagent mix for RT-PCR using an automated device,

j) dispersing/distributing the nucleic acids isolated in step (h) within the dispersed reagent mix of step (i) using an automated device, and,

k) determining the *in vivo* levels of transcripts using the nucleic acid/RT-PCR reagent mix of step (j) in an automated setup.

27. (Previously presented) The method according to claim 25 wherein the immune response of an individual towards an antigen against which the individual has been pre-immunized is tested, the first substance is the antigen under investigation and the levels of cytokine mRNA are tested.

28. (Previously presented) The method according to claim 27 wherein said cytokine is one or more selected from the group consisting of IL-2, IL-4, IL-13, and IFN-gamma.

29. (Previously presented) The method according to claim 25 wherein the hyperallergenicity of an individual towards an antigen is tested, the first substance is the antigen under investigation and the levels of IL-4 mRNA are tested.

30. (Previously presented) The method according to claim 25 wherein rejection of an organ transplant in an individual towards an antigen is tested, wherein the first substance is a histocompatibility antigen of the donor and the levels of IL-2 mRNA are tested.

31. (Previously presented) A method of testing RNA components in a stabilized blood sample comprising:

collecting a blood sample in the vessel according to claim 1;

pulsing a sample of blood with an antigen, subsequently inhibiting cellular RNA degradation and/or gene induction therein; and

testing RNA components in the stabilized blood sample so pulsed.

32. (Currently amended) A method of testing RNA components in a stabilized blood sample comprising:

extracting a pre-determined volume sample of blood from an individual using said ~~needle or cannula~~vessel according to claim 9;

pulsing said sample with an antigen, subsequently inhibiting cellular RNA degradation and/or gene induction therein; and

testing RNA components in the stabilized blood sample so pulsed.

33. (Currently amended) A kit suitable for pulsing a liquid biological sample with a first substance, and subsequently introducing an agent that inhibits cellular RNA degradation and/or gene induction thereto, and testing mRNA components in the stabilized blood sample so pulsed, said kit comprising:

a) a vessel in which said first substance is present, and

b) a container in which said agent is present,

wherein the inside of said vessel and the inside of said container are connected, and a physical barrier temporarily blocks said connection.

34. (Cancelled)

35. (Previously presented) The kit according to claim 33 wherein said first substance is immobilized on part or all of the inside surface of said vessel.

36. (Previously presented) The kit according to claim 33 wherein said first substance is immobilized on a solid support.

37. (Previously presented) The kit according to claim 33 wherein said first substance is a liquid.

38. (Previously presented) The kit according to claim 33 wherein said first substance is a solid.

39. (Previously presented) The kit according to claim 33 wherein said vessel comprises one or more openings.

40. (Previously presented) The kit according to claim 33 said vessel comprises one or more areas suitable for puncture by a syringe needle.

41. (Previously presented) The kit according to claim 40 wherein said area is a re-sealable septum.

42. (Previously presented) The kit according to claim 33 wherein said vessel comprises one or more fittings suitable for receiving a syringe and transmitting the contents therein to the interior of said vessel.

43. (Previously presented) The kit according to claim 33 wherein said vessel comprises one or more fittings suitable for receiving a hypodermic syringe needle.

44. (Previously presented) The kit according to claim 33 wherein said vessel comprises one or more cannulas suitable for withdrawing bodily fluids.

45. (Previously presented) The kit according to claim 33 wherein said vessel comprises one or more valves which are capable of minimizing the flow of liquid from the vessel, minimizing the flow of gas into or from the vessel, and/or allowing the flow of liquid biological sample into the vessel.

46. (Previously presented) The kit according to claim 33 wherein said vessel comprises one or more means through which displaced gas may be expelled.

47. (Previously presented) The kit according to claim 33 wherein said vessel is held under negative pressure.

48. (Previously presented) The kit according to claim 34 wherein the physical barrier is opened by the application of physical force to said vessel.

49. (Previously presented) The kit according to claim 48 wherein said force transmits an opening means to said physical barrier.

50. (Previously presented) The kit according to claim 48 wherein said force irreversibly opens said physical barrier.

51. (Previously presented) The kit according to claim 33 wherein said vessel and/or container comprises an indication for dispensing a known volume of stabilizing agent therein.

52. (Previously presented) The kit according to claim 33 wherein said first substance comprises one or more immune system antigens.

53. (Previously presented) The kit according to claim 52 wherein said immune system antigens are vaccine components.

54. (Previously presented) The kit according to claim 52 wherein said immune system antigens are antigens which provoke a hyperallergenic response.

55. (Previously presented) The kit according to claim 52 wherein said immune system antigens are one or more selected from the group consisting of histocompatibility antigens, bacterial LPS, tetanous toxoid, a cancer immunotherapy antigen, MAGE-3, a cat allergen, Feld1, antigen presenting cells from an organ donor, an autoantigen, and GAD65.

56. (Previously presented) The kit according to claim 55 wherein said inhibitor of cellular RNA degradation and/or gene induction is that as found in a PAXgene^{TM} Blood RNA Tube.

57. (Previously presented) The kit according to claim 33 for testing the immune response of an individual towards an antigen against which the individual has been pre-immunized wherein the first substance is the antigen under investigation and the mRNA tested is cytokine mRNA.

58. (Previously presented) The kit according to claim 57 wherein said cytokine is one or more selected from the group consisting of IL-2, IL-4, IL-13, and IFN-gamma.

59. (Previously presented) The kit according to claim 33 for testing an individual for hyperallergenicity towards an antigen wherein the first substance is the antigen under investigation and the mRNA tested is IL-4 mRNA.

60. (Previously presented) The kit according to claim 33 for testing an individual for rejection of an organ transplant wherein the first substance is a histocompatibility antigen of the donor and the mRNA tested is IL-2 mRNA.

61. (Previously presented) The kit according to claim 33 further comprising one or more oligonucleotides suitable for said testing said mRNA(s).